

In The Claims:

Please cancel claim 2, without prejudice or disclaimer.

Please add new claims 22 - 24.

The following listing of claims will replace all prior versions of claims in the application.

Listing of Claims

Claims 1 (cancelled)

Claims 2 (cancelled)

Claim 3 (previously presented): A communication network system capable of providing communication via an internetwork, the communication network system comprising

(a) a tunnel server which provides for a tunneling service via an internetwork, and has a global address for identifying a first end point of a tunnel provided by the tunneling service;

(b) a mobile wireless system for communicating via a wireless link, and having a mobile virtual tunneling protocol client which has access to the global address for the first end point so as to enable communication with the tunnel server, the mobile wireless system being capable of being transported to a location remote from the first end point; and

(c) a tunnel agent subsystem for communication via the wireless link with the mobile virtual tunneling protocol client of the mobile wireless system and for communication via an internetwork with the mobile virtual tunneling protocol server for establishing a mobile virtual tunneling protocol tunnel between the mobile virtual tunneling protocol client of the mobile wireless system located at a second end point remote from the first end point and the mobile virtual tunneling protocol server at the first end point, the tunnel agent subsystem assigning to the mobile wireless system a local end point identification for identifying the second end point of the mobile virtual tunneling protocol tunnel.

Claim 4 (previously presented): A communication network system according to claim 3, with the mobile wireless system having provision for authenticating a mobile virtual tunneling protocol registration between the mobile virtual tunneling protocol client of the mobile wireless system and a tunnel agent subsystem with which the mobile wireless system has wireless communication, prior to opening of the mobile virtual tunneling protocol tunnel for communication.

Claim 5 (previously presented): A communication network system according to claim 3, with the mobile wireless system being capable of communicating via its wireless link and via an internetwork with the first end point utilizing a mobile virtual tunneling protocol at the data link layer, the mobile virtual tunneling protocol being transparent to protocols above the data link layer.

Claim 6 (previously presented): A communication network system according to claim 3, with the mobile wireless system being capable of communicating via its wireless link and via an internetwork with the first end point utilizing a mobile virtual tunneling protocol, while the mobile wireless system runs an arbitrary network-layer protocol and roams seamlessly across network boundaries.

Claim 7 (previously presented): A communication network system according to claim 3, with the tunnel server comprising a layer two tunneling protocol (L2TP) network server with a point-to-point port serving as the first end point of the mobile virtual tunneling protocol tunnel.

Claim 8 (previously presented): A communication network system according to claim 3, with the tunnel agent subsystem being operative to establish a mobile virtual tunneling protocol tunnel for a mobile wireless system which supports a non internet protocol (non-IP).

Claim 9 (previously presented): A communication network system according to claim 3, with the mobile wireless system having wide area and local area connectivity so that the mobile wireless system can roam between a wireless link to a remote local area network which is coupled to the first end point via an internetwork, and a wide area wireless link to a wide area network without losing its logical connection to the first end point.

Claim 10 (previously presented): A communication network system according to claim 3, with the mobile wireless system having wide area connectivity utilizing a wireless wide area link that is maintained for a period of time after a wireless local area link becomes available, to facilitate rapid roaming of the mobile wireless system.

Claim 11 (previously presented): A communication network system according to claim 3, wherein the tunnel agent subsystem serves to concatenate a point-to-point protocol (PPP) tunnel, and a layer two tunneling protocol (L2TP) tunnel.

Claim 12 (previously presented): A communication network system according to claim 3, wherein a data link tunnel from a mobile wireless system is concatenated with an Internet Protocol (IP) tunnel to form the mobile virtual tunneling protocol tunnel.

Claim 13 (previously presented): A communication network system according to claim 3, wherein the global address identifying the first end point of the mobile virtual tunneling protocol tunnel is a phone number.

Claim 14 (previously presented): A communication network system according to claim 3, wherein the global address identifying the first end point of the mobile virtual tunneling protocol tunnel is an IEEE 802 address.

Claim 15 (previously presented): A communication network system according to claim 3, wherein the global address identifying the first end point of the mobile virtual tunneling protocol tunnel is an ATM address.

Claim 16 (previously presented): A communication network system according to claim 3, wherein the global address identifying the first end point of the mobile virtual tunneling protocol tunnel is an Internet Protocol (IP) address.

Claim 17 (previously presented): A communication network system according to claim 3, which supports both enterprise and global roaming of the mobile wireless system.

Claim 18 (previously presented): A communication network system according to claim 3, which supports rapid roaming of the mobile wireless system.

Claim 19 (previously presented): A communication network system according to claim 3, wherein the tunnel agent subsystem supports a multiplex of multiple connections.

Claim 20 (previously presented): A communication network system according to claim 3, which utilizes a mobile virtual network tunneling protocol which is transparent to protocols above the data link layer.

Claim 21 (previously presented): A communication network system capable of providing communication via an internetwork, the communication network system comprising

(a) a mobile virtual tunneling protocol server which provides for a tunneling service via an internetwork, and has a global address for identifying a first end point of a tunnel provided by the tunneling service;

- (b) a mobile wireless system for communicating via a wireless link, and having a mobile virtual tunneling protocol client which has access to the global address for the first end point so as to enable communication with the mobile virtual tunneling protocol server, the mobile wireless system being capable of being transported to a location separated from the first end point by an internetwork; and
- (c) said mobile wireless system being operable when in wireless communication with a remote network separated from the mobile virtual tunneling protocol server by an internetwork to obtain assignment of a local end point identification from the remote network for identifying a second end point for a mobile virtual tunneling protocol tunnel, such that the mobile virtual tunneling protocol client of the mobile wireless system can establish via a wireless link to the remote network, a mobile virtual tunneling protocol tunnel for communication with the mobile virtual tunneling protocol server.

Claim 22 (new): A communication network system according to claim 3, wherein communication from the tunnel agent subsystem to the tunnel server enters the tunnel server via a point-to-point port.

Claim 23 (new): A communication network system according to claim 21, wherein communication from second end point to the first end point enters the mobile virtual tunneling protocol server via a point-to-point port.

Claim 24 (new): A communication network system capable of providing communication via an internetwork, the communication network system comprising

- (a) a home network having a mobile virtual private network tunneling protocol server which provides for a tunneling service via an internetwork;

- (b) a mobile wireless system for communicating via a wireless link, and having a mobile virtual private network tunneling protocol client which provides for a tunneling service via an internetwork; and
- (c) a mobile virtual private network tunneling protocol foreign agent subsystem for communication via an internetwork with the mobile virtual private network tunneling protocol server and for communication via the wireless link with the mobile virtual private network tunneling protocol client of the mobile wireless mobile system to establish a mobile virtual private network tunneling protocol tunnel between the mobile virtual private network tunneling protocol client of the mobile wireless system and the mobile virtual private network tunneling protocol server of the home network, so as to enable communication between the mobile wireless system and the home network via the wireless link and via an internetwork when the mobile wireless system is at a location remote from the home network
- (d) wherein communication from the mobile virtual private network tunneling protocol foreign agent subsystem to the home network enters the home network via a point-to-point port.